



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/822,625

04/12/2004

Michael Krebs

HENK-0066/H5395

3301

38857

7590

03/19/2009

WOODCOCK WASHBURN LLP

CIRA CENTRE, 12TH FLOOR

2929 ARCH STREET

PHILADELPHIA, PA 19104-2891

EXAMINER

NILAND, PATRICK DENNIS

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/19/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/822,625

Applicant(s)

KREBS ET AL.

Examiner

Patrick D. Niland

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-13 and 16-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13, and 16-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

1. The amendment of 12/2/08 has been entered. Claims 1-8, 10-13, and 16-34 are pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8, 10-13, and 16-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The instant claims recite “including” or “include” in claims 1 and 32-34 and thereby in the claims which depend therefrom. It is unclear what other things are required by “including” and “include” of the instant claims because these terms imply that other unspecified materials are also required by definition of “including” and “include”. Not specifying the other materials required by “including” and “include” fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner does not argue that “including” or “include” are not open. The cited sections of the MPEP in the applicant’s arguments do not in fact state that these terms are exact synonyms and any such assertion is contrary to the definition of “includes” or “including”, which contrary to “comprising” has not been redefined by the courts. “Includes” and “including” are therefore taken to continue to possess their usual meanings as requiring that specified in addition to other things that are included although the terms are clearly “open” language. The applicant’s arguments do not address the above rejection per se. This rejection is therefore maintained for the reasons stated above. The MPEP does not alleviate the above stated requirement of 35 USC 112 second paragraph.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-8, 10-13, 16-22, 24-25, 27-31, and 34 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 of U.S.

Patent No. 5994493 Krebs. Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ somewhat in scope, it would have been obvious to one of ordinary skill in the art to practice the instantly claimed inventions from the claims of the patentee because the patented claims encompass the instantly claimed invention. Moisture curing hotmelt adhesive encompasses the instantly claimed reactive adhesives. Any additional compounds of the patented claims are encompassed by “comprising” of the instant claims.

The instant claims encompass using mixtures of polyether polyols of the claimed molecular weight by the language “at least one compound”. The polyol ii falls within the scope of the instantly claimed polyether polyol having a Mn of less than 1000 and component i of the patentee’s claim 1 falls within the scope of the instantly claimed polyether polyol having a Mn of less than 1000 when its Mn is below 1000. Claim 9 of the patentee recites 2,4’ diphenylmethane diisocyanate. For these reasons, the applicant’s arguments are not persuasive on their face regarding the instant claims. The polyester polyol of the patentee’s claim 1 ingredient i is also encompassed by the instant claim language. “Liquid” of the patented claims polyol is expected to include “partly crystalline” polyols where the polyols of the patented claims have the upper molecular weights and linear, non-branched segments. These crystalline segments may be solvated by the other amorphous segments to give liquid final product. This reads on the instant claim 12. The patentee defines the claimed polyisocyanates as being the instantly claimed isocyanate at column 7, lines 1-6 of their specification and claims 9, 18 and 29. The lower molecular weight fraction of the claimed patented adhesive is the adhesion promoter of the instant claims 1, 16-17, and 22 based on the definition of average molecular weight and is

capable of the claimed migration based on the definitions of viscosity average molecular weight, intrinsic and inherent viscosities. The composition of the patented claims inherently contain the instantly claimed adhesion-intensifying additive properties since these lower molecular weight polyisocyanate adducts contain groups capable of reacting with some substrate which necessarily intensifies adhesion over adhesives which give no covalent bonding and will inherently have the claimed vapor pressure since their molecular weights will also exclude volatilization to any appreciable extent. The claimed amounts can be thought of as being divided out of the bulk polymer without affecting the polymer of the patentee's claims which reads on the instant claims 16-17. Furthermore, the temperatures and catalysts of the patentee will necessarily give some trimerization of the polyisocyanates used in making the polymer, particularly the amine catalysts as is well documented in the art which meets the instant claim 18. The claimed NCO:OH ratios encompass those of the instant claims 4-5. Where the lower amounts of NCO are used, the free monomer contents of claims 20-21 and 24-25 are encompassed. The use of only 2,4' MDI encompasses the instant claims 6-8. Free monomeric isocyanate meets the instant claim 14. The process claims are silent regarding reaction temperature and therefore encompass all temperatures at which polyols and polyisocyanates can react, which encompasses the instantly claimed reaction temperatures of the instant claims 27-29 because these reactions are well known to occur below the claimed temperatures, particularly when catalyst is used.

Since the compositions of the compending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by "hot melt". Claim 1 has molecular weights falling within the scope of those of the instant claims.

The applicant's argument that Krebs requires an aromatic polyol that is excluded by "consisting" of the instant claims is not persuasive. The instant claims recite "at least one compound" including two or more of the recited polyols and do not exclude the polyethers from being initiated by the aromatic polyol of the reference. See claim 1 and the recitations pertinent to the polyol alkoxylation product of at least one aromatic dihydroxy compound of component aii of claim 1 of Krebs, which is encompassed by the instant claim language "polyether-polyols". There is no evidence that the polyurethane of Krebs contains more monomeric isocyanate than encompassed by claim 2 and does not disclose the amounts of the instant claims 6-8. The applicant's arguments have been fully considered but are not persuasive for the reasons above. The most recent disagreement of 12/2/08 with this rejection does not further point out any errors in the above rejection. This rejection is therefore maintained.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8, 10-13, 16-22, 24-25, 27-31, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5994493 Krebs.

Krebs discloses the instantly claimed adhesives and methods of making them at the abstract; column 4, lines 23-67, particularly lines 23-25, 27-32, 40-52 and 57-60; column 5, lines 5-67; column 6, lines 1-67; column 7, lines 1-67, particularly 1-6; column 10, lines 1-67, particularly 18-45, 53, and 53-67; column 11, lines 1-67, particularly 1-18; column 12, lines 1-67, particularly 11 and 36-39; column 13, lines 1-8; column 14, lines 1-7, particularly 5-7; and the remainder of the document. Moisture curing hotmelt adhesive encompasses the instantly claimed reactive adhesives. Any additional components of the patented claims are encompassed by "comprising" of the instant claims. Any additional components of the component (i) of the instant claims remain encompassed by "consisting essentially of" because the applicant has not demonstrated any additional components of the cited prior art to materially affect the basic and novel characteristics of the compositions in which (i) recites "consisting essentially of" in a manner commensurate in scope with the instant claims and the cited prior art. See MPEP 2111.03 [R-3] Transitional Phrases.

The instant claims encompass using mixtures of polyether polyols of the claimed molecular weight by the language "at least one compound". The polyol ii falls within the scope of the instantly claimed polyether polyol having a Mn of less than 1000 and component i of the patentee's claim 1 falls within the scope of the instantly claimed polyether polyol having a Mn of less than 1000 when its Mn is below 1000. Claim 9 of the patentee recites 2,4' diphenylmethane diisocyanate. For these reasons, the applicant's arguments are not persuasive on their face regarding the instant claims. The remaining ingredients of the instant claim 1 are optional, i.e. not required. The polyester polyol of the patentee's claim 1 ingredient i is also encompassed by the instant claim language. "Liquid" of the patented claims polyol is expected to include "partly

crystalline" polyols where the polyols of the patented claims have the upper molecular weights and linear, non-branched segments. These crystalline segments may be solvated by the other amorphous segments to give liquid final product. This reads on the instant claim 12. The patentee defines the claimed polyisocyanates as being the instantly claimed isocyanate at column 7, lines 1-6 of their specification and claims 9, 18 and 29.

The lower molecular weight fraction of the claimed patented adhesive is the adhesion promoter of the instant claims 1, 16-17, and 22 based on the definition of average molecular weight and is capable of the claimed migration based on the definitions of viscosity average molecular weight, intrinsic and inherent viscosities. The composition of the patented claims inherently contain the instantly claimed adhesion-intensifying additive properties since these lower molecular weight polyisocyanate adducts contain groups capable of reacting with some substrate which necessarily intensifies adhesion over adhesives which give no covalent bonding and will inherently have the claimed vapor pressure since their molecular weights will also exclude volatilization to any appreciable extent. The claimed amounts can be thought of as being divided out of the bulk polymer without affecting the polymer of the patentee's claims which reads on the instant claims 16-17. Furthermore, the temperatures and catalysts of the patentee will necessarily give some trimerization of the polyisocyanates used in making the polymer, particularly the amine catalysts as is well documented in the art which meets the instant claim 18. The claimed NCO:OH ratios encompass those of the instant claims 4-5. Where the lower amounts of NCO are used, the free monomer contents of claims 20-21 and 24-25 are encompassed. The use of only 2,4' MDI encompasses the instant claims 6-8. Free monomeric isocyanate meets the instant claim 14. The process claims are silent regarding reaction

temperature and therefore encompass all temperatures at which polyols and polyisocyanates can react, which encompasses the instantly claimed reaction temperatures of the instant claims 27-29 because these reactions are well known to occur below the claimed temperatures, particularly when catalyst is used.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by "hot melt". Claim 1 has molecular weights falling within the scope of those of the instant claims.

The applicant's argument that Krebs requires an aromatic polyol that is excluded by "consisting" of the instant claims is not persuasive. The instant claims recite "at least one compound" including two or more of the recited polyols and do not exclude the polyethers from being initiated by the aromatic polyol of the reference. See claim 1 and the recitations pertinent to the polyol alkoxylation product of at least one aromatic dihydroxy compound of component aii of claim 1 of Krebs, which is encompassed by the instant claim language "polyether-polyols". There is no evidence that the polyurethane of Krebs contains more monomeric isocyanate than encompassed by claim 2 and does not disclose the amounts of the instant claims 6-8. The applicant's arguments have been fully considered but are not persuasive for the reasons above. This rejection is therefore maintained.

9. Claims 1-8, 10-13, and 16-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 5994493 Krebs.

Krebs discloses the instantly claimed adhesives and methods of making them at the abstract; column 4, lines 23-67, particularly lines 23-25, 27-32, 40-52 and 57-60; column 5, lines 5-67; column 6, lines 1-67; column 7, lines 1-67, particularly 1-6; column 10, lines 1-67,

Art Unit: 1796

particularly 18-45, 53, and 53-67; column 11, lines 1-67, particularly 1-18; column 12, lines 1-67, particularly 11 and 36-39; column 13, lines 1-8; column 14, lines 1-7, particularly 5-7; and the remainder of the document. Moisture curing hotmelt adhesive encompasses the instantly claimed reactive adhesives. Any additional components of the patented claims are encompassed by "comprising" of the instant claims. Any additional components of the component (i) of the instant claims remain encompassed by "consisting essentially of" because the applicant has not demonstrated any additional components of the cited prior art to materially affect the basic and novel characteristics of the compositions in which (i) recites "consisting essentially of" in a manner commensurate in scope with the instant claims and the cited prior art. See MPEP 2111.03 [R-3] Transitional Phrases.

The instant claims encompass using mixtures of polyether polyols of the claimed molecular weight by the language "at least one compound". The polyol ii falls within the scope of the instantly claimed polyether polyol having a Mn of less than 1000 and component i of the patentee's claim 1 falls within the scope of the instantly claimed polyether polyol having a Mn of less than 1000 when its Mn is below 1000. Claim 9 of the patentee recites 2,4' diphenylmethane diisocyanate. For these reasons, the applicant's arguments are not persuasive on their face regarding the instant claims. The remaining ingredients of the instant claim 1 are optional, i.e. not required. The polyester polyol of the patentee's claim 1 ingredient i is also encompassed by the instant claim language. "Liquid" of the patented claims polyol is expected to include "partly crystalline" polyols where the polyols of the patented claims have the upper molecular weights and linear, non-branched segments. These crystalline segments may be solvated by the other amorphous segments to give liquid final product. This reads on the instant claim 12. The

Art Unit: 1796

patentee defines the claimed polyisocyanates as being the instantly claimed isocyanate at column 7, lines 1-6 of their specification and claims 9, 18 and 29.

The lower molecular weight fraction of the claimed patented adhesive is the adhesion promoter of the instant claims 1, 16-17, and 22 based on the definition of average molecular weight and is capable of the claimed migration based on the definitions of viscosity average molecular weight, intrinsic and inherent viscosities. The composition of the patented claims inherently contain the instantly claimed adhesion-intensifying additive properties since these lower molecular weight polyisocyanate adducts contain groups capable of reacting with some substrate which necessarily intensifies adhesion over adhesives which give no covalent bonding and will inherently have the claimed vapor pressure since their molecular weights will also exclude volatilization to any appreciable extent. The claimed amounts can be thought of as being divided out of the bulk polymer without affecting the polymer of the patentee's claims which reads on the instant claims 16-17. Furthermore, the temperatures and catalysts of the patentee will necessarily give some trimerization of the polyisocyanates used in making the polymer, particularly the amine catalysts as is well documented in the art which meets the instant claim 18. The claimed NCO:OH ratios encompass those of the instant claims 4-5. Where the lower amounts of NCO are used, the free monomer contents of claims 20-21 and 24-25 are encompassed. The use of only 2,4' MDI encompasses the instant claims 6-8. Free monomeric isocyanate meets the instant claim 14. The process claims are silent regarding reaction temperature and therefore encompass all temperatures at which polyols and polyisocyanates can react, which encompasses the instantly claimed reaction temperatures of the instant claims 27-29.

because these reactions are well known to occur below the claimed temperatures, particularly when catalyst is used.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by “hot melt”. Claim 1 has molecular weights falling within the scope of those of the instant claims.

It would have at least been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to perform the methods and make the adhesives of the patentee such that they fall within the scope of the instant claims because the patentee’s disclosure and claims encompasses the instantly claimed inventions and the instantly claimed adhesives and methods of making them would have been expected to give the properties disclosed by the patentee.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the component of the instant claim 23 in the adhesive of the patentee because Krebs teaches that up to 10% triisocyanate may be used at column 4, lines 40-52 and trimethylolpropane and glycerol are the most common and well known means for achieving such triisocyanate prepolymers by reacting them with the typical well known diisocyanate monomers. It would have at least been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the adhesion promoter of the instant claim 26 because Krebs teaches the use of additives to the adhesive to enhance its properties and aminosilanes having alkoxy silane functionality are well known for giving adhesion promotion to NCO functional hot melt adhesives and would have been expected to provide this function to the adhesives of Krebs.

Since the compositions of the copending claims are the same as the instant claims, they are expected to be inherently solid as is also indicated by “hot melt”. Claim 1 has molecular

weights falling within the scope of those of the instant claims. It is not seen that the higher molecular weight polyols of the patentee do not give the adhesion promotion of the instant claims 32-35 by the modulus they contribute to the final product.

The applicant's argument that Krebs requires an aromatic polyol that is excluded by "consisting" of the instant claims is not persuasive. The instant claims recite "at least one compound" including two or more of the recited polyols and do not exclude the polyethers from being initiated by the aromatic polyol of the reference. See claim 1 and the recitations pertainent to the polyol alkoxylation product of at least one aromatic dihydroxy compound of component aii of claim 1 of Krebs, which is encompassed by the instant claim language "polyether-polyols". There is no evidence that the polyurethane of Krebs contains more monomeric isocyanate than encompassed by claim 2 and does not disclose the amounts of the instant claims 6-8. The applicant's arguments have been fully considered but are not persuasive for the reasons above. This rejection is therefore maintained.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to 3 whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Patrick D Niland/
Primary Examiner,
Art Unit 1796